

V.A.

24902 KISELEV, V. A. Obshcheye Uravmeniye Verevochoy Krivoy Pri Deystvii Vertikal noy Nagruzki. Trudy Mosk. Avtomob-dor. In-ta Im. Molotova, Vits. 11, 1949, S. 66-93 - Bibliogr: 5 Nazv. SO: Letopis', No.33, 1949

KISELEV, V.A.

APPRING Follows, Vyp. 11, 1949, S. 160-66

SO: Letopis', No.33, 1949

KISELËV, V. A.

TREASURE ISLAND BIBLIOGRAPHICAL REPORT

AID 535 - I

PHASE I

Call No.: AF603914

Call No.: AF603914

Author: KISELEV, V. A., Prof., Dotsent of Tech. Sci.

Full Title: DYNAMIC INFLUENCE LINES OF THE BENDING MOMENT AND OF THE BOOK

K voprosu o dinamicheskikh linyakh vliyaniya LATERAL FORCE IN BEAMS 1zgibayushchego momenta i poperechnoy sily Transliterated Title:

Originating Agency: Moscow Institute of Railroad Transport Engineers
Originating Agency: Moscow Institute of Railroad Transport
im. Stalin (MIIT), Trudy, Issue 76, Construction Mechanics
Publishing House: State Publishing House of Railroad Transport
Date: 1052 No. 15 (108-122) No. 06 conies: 1 000 PUBLISHING DATA

Date: 1952

Editor-in-Chief: Litvin, G. A., Kand. of Tech. Sci. Editors: Profs., Doc. of Tech. Sci. Prokof'yev, I. P., Editorial Staff

Pratusevich, Ya. A., and Sinel'nikov, V. V.
Others: The preface was written by Gerasimov, A. S., Chief of MIIT,

PURPOSE: A paper intended for engineering-technical and

scientific workers of railroad transport.

Coverage: On the basis of the work of the academician Krylov, A. N., TEXT DATA

CIA-RDP86-00513R000722810011-**APPROVED FOR RELEASE: 09/17/2001** 

K voprosu o dinamicheskikh linyakh vliyaniya izgibayushchego momenta i poperechnoy sily v balkakh

the author gives a method for the determination of the influence line of the bending moment and of the lateral force in a beam, due to a mass-less load moving with a determined speed. The analyzis of some basic dynamic coefficients are given. The author divides his article as follows: 1. Introduction; 2. Solution of acad. A. N. Krylov; 3. Dynamic coefficients; 4. Dynamic influence lines; 5. Auxiliary tables; 6. Movement of the band load; 7. Influence lines due to load periodically changing in time. Formulae, tables

No. of References: Total - 5, Russian 4, dated 1905-1939. Other 1,

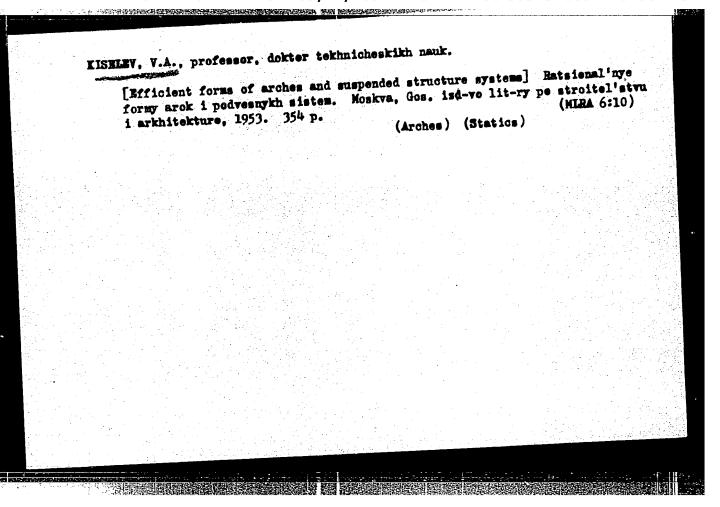
Facilities: Names of several scientists working in the field of determination of stresses due to moving loads are mentioned in the text.

RUBIEL, M.V.: KISHLEY, V.A., doktor tekhnicheskikh nauk, professor, retsengent; PUFOV, A.A., doktor tekhnicheskikh nauk, professor, retsengent; LNVIR, M.A., dotsent, redaktor.

[Manual for practical studies on the strength of materials]
Rukovodstvo k prakticheskin saniatiiam po sepretivleniiu materialov. isd. 2-e. ispr. i dep. Moskva, Ges. nauchac-tekhn. isd-ve malniostratical nei lit-ry. 1953. 307 p.

(Strength of materials)

(Strength of materials)



The Committee on Stalin Prizes (of the Council of Ministers USSR) in the rights of science and inventions announces that the following scientific works, popular scientific books, and textbooks have been submitted for competition for Stalin Prizes for tific books, and textbooks have been submitted for competition for Stalin Prizes for the years 1952 and 1953. (Sovetakaya Kultura, Moscow, No. 22-40, 20 Feb - 3 Apr 1954)				
Keme	Title of Work	Moninated by		
Kiselev, V.A.	"Rational Forms of Arches and Suspension Systems"	Moscow Automobile Highway Institute imeni V.M. Molotov		

RISELEV, V. A.

"The Rational Axis of Three-Ball Arches of Underwater Tunnels of Constant Cross Section," Dokl. AN SSSR, 90, No.1, pp 45-48, 1953

Rational axis is the name given to that axis for which the bending moments on all cross sections of an arch equal zero. Derives the differential eqs for the desired rational axis of an arch, which eqs are too complicated for integration; hence gives a modification for earier solution. Presented by Acad. A.I.Nekrasov 16 Mar 53

259T100

Mischell Isaak Moiseyevich, doktor tekhnicheskikh nauk, professor;

BEZUKHOV, N.I., professor, doktor tekhnicheskikh nauk, retsensent;

KISTINV V.A. professor, doktor tekhnicheskikh nauk, retsensent.

KISTINV V.A. professor, doktor tekhnicheskikh nauk, retsensent.

KISTINV V.A. professor, doktor tekhnicheskikh nauk, retsensent.

SMUU II. fandidat tekhnicheskikh nauk, nauchnyy redaktor;

TUMARKIN, D.M., redaktor; SMOLYAKOVA, M.V., tekhnicheskiy redaktor.

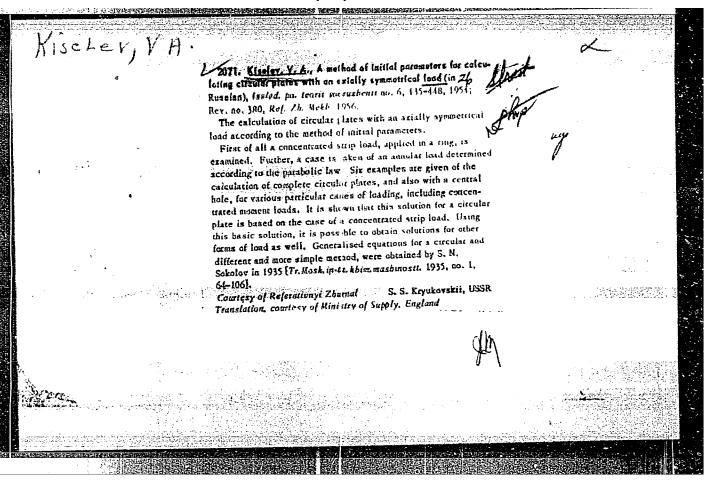
[Course in the structural mechanics of bar systems] Kurs stroitel'
noi mekhaniki stershnevykh sistem. Part 2. [Statically indetermina
te systems] Staticheski neopredelimye sistemy. Isd. 2-e, perer.

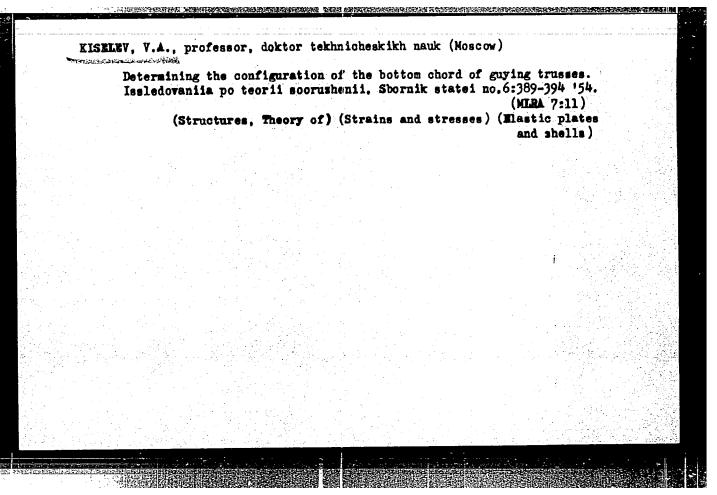
Moskva, Gos. isd-vo lit-ry po stroitel'stvu i arkhitekture. 1954.

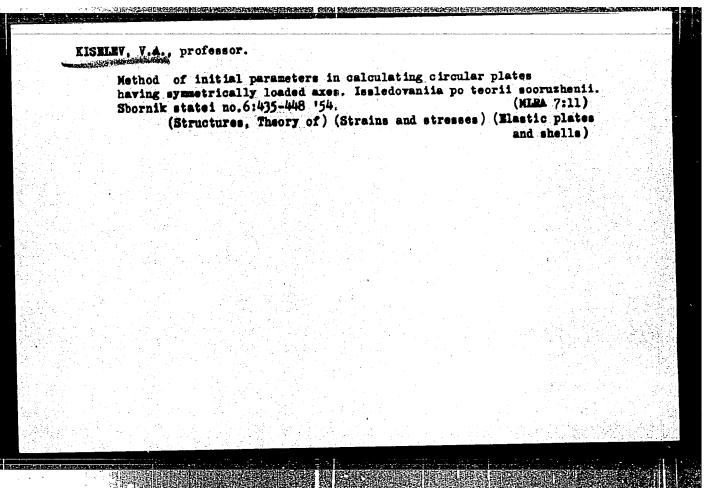
(MIRA'7:11)

1. Chlen-korrespondent Akademii Nauk SSSR (for Rabinovich)

(Structures, Theory of)



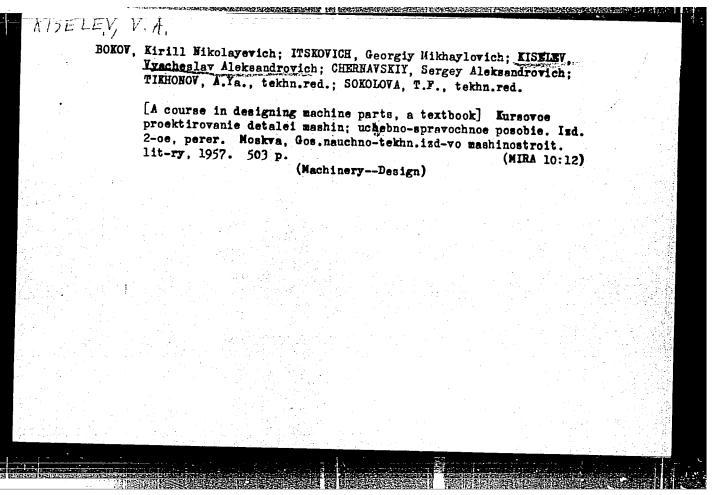




ITSKOVICH, G.M.; KISKLEY, W.A.; CHERMAYSKIY, S.A.; BOKOV, K.M.; FAGEL',
A.Z., BONCH-OSMOLOVSKIY, M.A.; GRINGHAR, G.M.; CHERMAYSKIY, S.A.,
kandidat tekhnicheskikh nauk, nauchnyy redaktor; TIKHONOV, A.Ya.,
tekhnicheskiy redaktor

[Collection of problems and methods of celculating machine parts]
Shornik zadach i primerov rescheta detalei meshin. Moskva, Gos.
nauchno-tekhn. izd-vo mashinostroit. lit-ry. 1957. 267 p. (MIRA 10:4)

(Machinery-Design)



ISECEK V.H.

AUTHORS:

Call No. TF 230 .K8

Bokov, K.N., Itskovich, G.M., Kiselev, V.A.,

Chernavskiy, S.A.

TITLE:

Undergraduate Course in Design of Machine Elements, (Kursovoye proyektirovaniye detaley mashin) (Uchebno-

-spravochnoye posobiye)

PUB. DATA:

Gosudarstvennoye nauchnortekhnicheskoye izdatel'stve

mashinostroitel noy literatury, Moscow, 1957,

2d ed. rev., 503 pp., 25,000 copies

ORIG. AGENCY: None given

EDITORS:

Ed of Publishing House: Krylov, V.I., Engr.; Science

Ed.: Itskovich, G.M., Engr.; Tech. Editors: Tikhanov, A.Ya., and Sokolova, T.F.; Corrector:

Matisen, V.G.

PURPOSE:

This book is approved by the Administration of

Special Secondary Educational Institutions, Ministry of Higher Education of the USSR, as a text for technical

Card 1/10 schools.

**APPROVED FOR RELEASE: 09/17/2001** CIA-RDP86-00513R0007222810011 Undergraduate Course in Design of Machine Elements.

COVERAGE:

The book is stated to contain the basic data and instructions for designing the drive mechanisms which are the standard subjects of study in courses in machine design at USSR technical schools. Typical design problems and calculations are given. The authors stress the importance of conducting student examinations in basically the same way as that in which students defending these are examined. Chapter XIV was written with the assistance of Bonch-Osmolovskiy, M.A., Candidate of Technical Sciences, and Grinchar, G.N., Candidate of Technical Sciences.

There are 34 references, all USSR.

SOV/124-58-1-1252

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 1, p 156 (USSR)

Kiselev, V. A. AUTHOR:

On the Selection of the Cross Sections of a Flexible Thread Loaded Uniformly Along Its Length With Due Consideration of the Weight of TITLE:

the Thread Itself (O podbore secheniy gibkoy niti pri ravnomernoy

nagruzke po yeye dline s uchetom sobstvennogo vesa niti)

PERIODICAL: V sb.: Issledovaniya po teorii sooruzheniy. Nr 7, Moscow, Gosstroyizdat, 1957, pp 597-603

Expressions are adduced for the tension, length, elongation, and necessary cross section of a thread; the expressions are based on an ABSTRACT:

exact solution for the thread as a catenary line. An example is

provided.

I. K. Snitko

Card 1/1

CIA-RDP86-00513R000722810011-9" **APPROVED FOR RELEASE: 09/17/2001** 

SOV/124-58-7-8097

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 7, p 113 (USSR)

AUTHOR:

Kiseley

TITLE:

The Influence Coefficients in the Calculation of Continuous Beams Through Fixed-point Ratios (Koeffitsiyenty vliyaniya pri raschete nerazreznykh balok cherez fokusnyye otnosheniya)

PERIODICAL:

Tr. Mosk. avtomob.-dor. in-ta, 1957, Nr 20, pp 113-116

ABSTRACT:

Bibliographic entry

1. Beams -- Mathematical analysis

Card 1/1

SOV/124-58-7-8095

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 7, p 113 (USSR)

AUTHOR:

Kiselev, V.A.

CONTRACTOR OF THE PROPERTY OF

TITLE:

PARTY TO THE PARTY On the Differential Relationships Existing Between the Influence Lines of the Bending Moment M, the Transverse Force Q, and the Longitudinal Force N (O differentsial nykh zavisimostyakh mezhdu liniyami vliyaniya izgibayushchego momenta M,

poperechnoy sily Q, i prodol noy sily N)

PERIODICAL: Tr. Mosk. avtomob.-dor. in-ta, 1957, Nr 20, pp 117-121

ABSTRACT:

Bibliographic entry

2. Materials--Stresses 1. Materials--Moments

Card 1/1

### "APPROVED FOR RELEASE: 09/17/2001

THE MEMBERS AND THE PROPERTY OF THE PROPERTY O

CIA-RDP86-00513R000722810011-9

SOV/124-58-8-9209

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 8, p 126 (USSR)

AUTHOR:

Kiselev, V.A.

TITLE:

Concerning Special Solutions for Some Types of Differential Equations Encountered in Structural Mechanics (O chastnykh resheniyakh nekotorykh vidov differentsial'nykh uravneniy v

stroitel noy mekhanike)

PERIODICAL: Tr. Mosk. avtomob.-dor. in-ta, 1957, Nr 20, pp 123-126

ABSTRACT:

Bibliographic entry

Card 1/1

ITSKOVICH, G.M.; KISELEY. Y.A.; CHERNAVSKIY, S.A., kand.tekhn.nauk;
BOKOY, K.B.; FAGEL', A.Z.; BONGH-OSMOLOVSKIY, M.A.; GRINCHAR,
G.H.; EL'KIED, V.D., tekhn.red.

[Collected problems and exercises of design for the course on
machine parts] Shornik sadach i primerov rescheta po kursu
detalei mashin. Isd.2-e, perer. Moskva, Gos.nauchno-tekhn.
isd-vo mashinostroit.lit-ry, 1959. 330 p. (MIRA 13:10)
(Mechanical engineering---Froblems, exercises, etc.)

DIKHOVICHNIY, Abram Ionovich; RABINOVICH, I.M., prof., retsenzent; KISKLEY,
V.A., prof., retsenzent; SNITKO, I.K., prof., otv.red.; PETHAKOVA,
Ter.F. red.izd-va; KOROVEMKOVA, Z.A., tekhn.red.

[Structural mechanics; abridged course] Stroitel'naia mekhanika;
sokrashchennyy kurs. Izd.3., perer. Moskva, Ugletekhisdat, 1959.
342 p.

(MIRA 12:4)

1. Rukovoditel' kafedry stroitel'noy mekhaniki Voyenno-inzhenernoy
akademii imeni V.V.Kuybysheva (for Rabinovich).

(Structures, Theory of)

KISELEY, V.A.

# PHASE I BOOK EXPLOITATION SOV/3453

- Chernavskiy, Sergey Aleksandrovich, Georgiy Mikhaylovich Itskovich, Vyacheslav Aleksandrovich Kiselev, Kirill Nikolayevich Bokov, Mikhail Aleksandrovich Bonch-Osmolovskiy, and Boris Pavlovich Kozintsov
- Proyektirovaniye mekhanicheskikh peredach; uchebno-spravochnoye posobiye po kursovomu proyektirovaniyu detaley mashin (Designing of Mechanical Drives; Text and Handbook On Machine Parts Designing) Moscow, Mashgiz, 1959. 740 p. 80,000 copies printed.
- Scientific Ed.: S.A. Chernavskiy; Ed. of Publishing House: N.Yu. Blagosklonova, Engineer; Tech. Ed.: A.Ya. Tikhanov; Managing Ed. for Information Literature: I.M. Monastyrskiy, Engineer.
- PURPOSE: This manual is intended for students in higher engineering schools.
- COVERAGE: This book describes the basic principles of the kinematic design of drives with a consideration of economy Card 1/8

Designing of Mecha	mical (Cont.)	SOV/	3453	
speed drives, are explained.	lamentals of designing and various types of med Methods of designing I les of design and constructs are mentioned. There	or strength are suction of drives	also dis- are present	ed.
TABLE OF CONTENTS	•			
Poreword			3	
Engineer)	t for a Term Project on and content of the assi f assignments	•	.N. Bokov, 5 5 8	
2 Beele week!	rawings and Calculation irements for preparation and the form of calcuneer)	n or drawling (r.	33 N. Bokov) 33 I. Itako- 39	
Card 2/8				

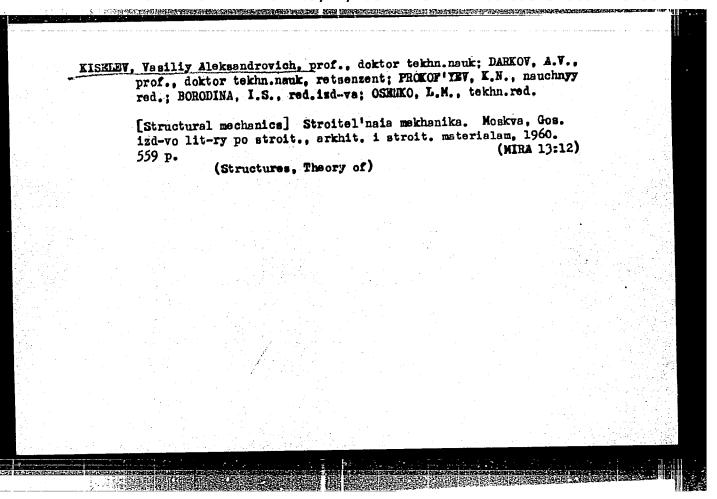
BOKOV, Kirill Nikolayevich; ITSKOVICH, Georgiy Mikhaylovich; inzh.; KISELEV,
Vyacheslav Aleksandrovich; CHERNAVSKIY, Sergey Aleksandrovich;
GIL'DENBERG, M.I., red.izd-va; MODEL', B.I., tekhn.red.

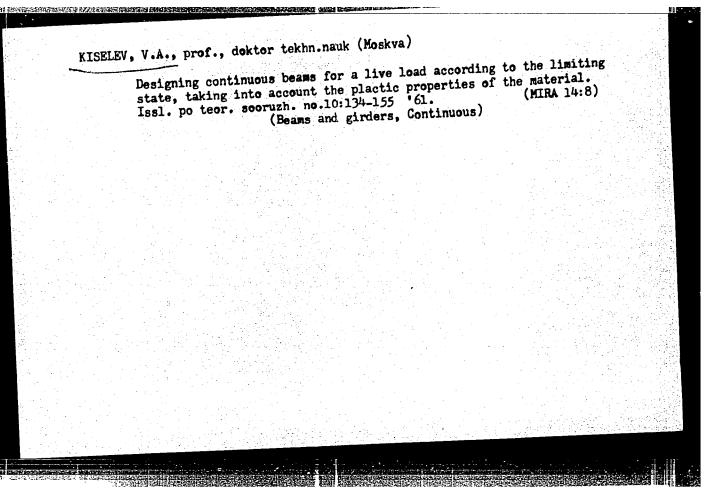
[Course in the design of machine parts; text and reference book]
Kursovoe proektirovanie detalei mashin; uchebno-spravochnoe posobie.

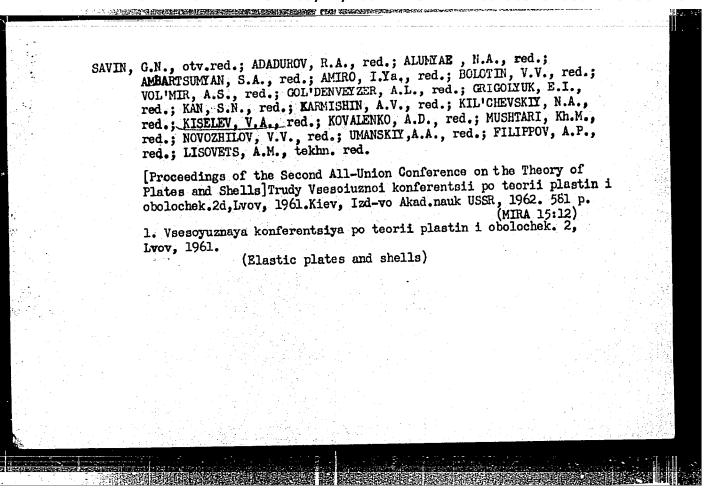
Izd.3. Leningrad. Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry.

1960. 507 p.

(Machinery-Design)







S/879/62/000/000/044/088 D234/D308

Kiselev, V. A. (Moscow) AUTHOR:

Dynamical surfaces of influence of displacement and in-TITLE:

ternal forces of orthotropic plates placed on an elastic base with two characteristics from a moving load having

a uniform velocity

Teoriya plastin i obolochek; trudy II Vsesoyuznoy konferentsii, L'voy; 15-21 sentyabrya 1961 g. Kiev, Izd-vo AN USSR, 1962, 274-279 SOURCE:

TEXT: The author solves the problem of bending of an orthotropic plate subject to any load varying with time

 $\mathbf{w}_{\mathbf{n}}(\mathbf{x},\mathbf{y})e^{-\mathbf{Qt}}(\mathbf{a_n}\sin\tilde{\omega_n}\mathbf{t}+\mathbf{b_n}\cos\tilde{\omega_n}\mathbf{t})+$ 

Card 1/2

Dynamical surfaces of ...  $\frac{s/879/62/000/000/044/088}{D234/D308}$   $+ \frac{w_n(x,y)}{\bar{\omega}_n} \int_0^t e^{-q(t-u)} q_n(u) \sin \bar{\omega}_n(t-u) du$  (16) and derives general expressions for the surfaces of influence of displacements, also for a plate with additionally hinged edges. An expression for the critical velocity is also derived. The author includes a summary of his investigation of principal vibrations of a plate with two opposite sides hinged; these are not published because of lack of space. There is 1 figure.

S/124/63/000/003/051/065 D234/D308

AUTHOR:

Kisselev, V. A.

TITLE:

PERIODICAL:

Bending of a beam beyond the yield limit, taking into account the variation of the cross-sectional dimensions

Referativnyy zhurnal, Mekhanika, no. 3, 1963, 31, abstract 3V211 (In collection: Issled. po teorii sooruzh.

no. 11, M., Gosstroyizdat, 1962, 227-252)

TEXT: The variations of cross-sectional dimensions in both directions are taken into account. Hypotheses of plane sections and constant volume are adopted. The variation of the cross-section in the elastic stage is ignored. The author uses the notions of true (logarithmic) deformation e and true stress s (calculated from the area F of the deformed section) in the axial tension (compression). He introduces the quantity  $\Psi = 1 - F/F_0$  ( $F_0$  is the initial area of

the cross-section) connected with the conventional deformation  ${\cal E}$ 

Card 1/2

Bending of a beam ...

S/124/63/000/003/051/065 D234/D308

and with e by the relation

$$\psi = \frac{\varepsilon}{1 + \varepsilon} = \frac{\exp e - 1}{\exp e}$$

Card 2/2

KISELEV. V.A.; AFANAS'YEV, A.M., nauchn. red.; TITOVA, V.A., red.;
EARANOV, Yu.V., tekhn. red.

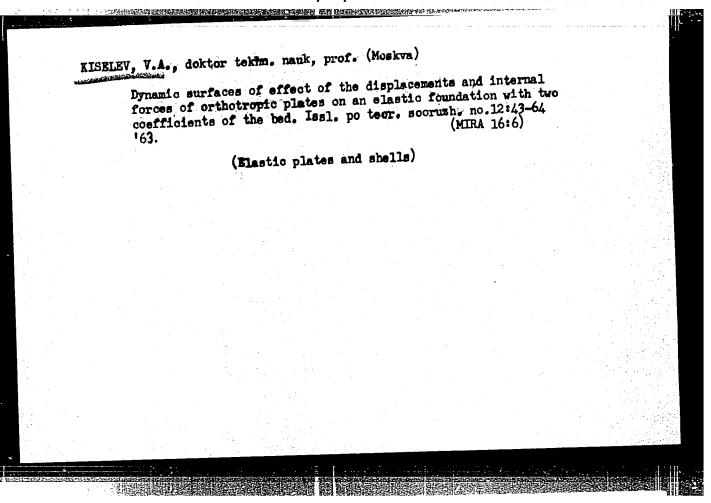
[Theory of external and internal forces in a bar] Teoriia
vneshnikh i vnutrennikh sil brusa. IAroslav', Rosvuzizdat,
1963. 66 p.

(Beams and girders)

(Beams and girders)

BAGREYEV, Vladimir Vladimirovich; VINOKUROV, Anatoliy Ivanovich;
KISEIEV Vrachealay Aleksandrovich; PANICH, Boris
Bentsionovich; ITSKOVICH, Georgy Atkhaylovich;
KONDRASHOV, D.A., insh., retsensent; RUBASHKIN, A.G.,
insh., retsensent; ARKUSHA, A.I., nauchn. red.; KCZINTSOV,
B.S., nauchn. red.; VASIL'IEVA, N.N., red.; YEROMITSKAYA,
Ye.Ie., red.; SHAURAK, Ye.N., red.; KRYAKOVA, D.M., tekhn.
red.

[Collection of problems in technical mechanics] Sbornik zadach po tekhnicheskoi mekhanike [By] V.V. Bagreev i dr. Leningrad, Sudpromgis, 1963. 551 p. (MIRA 16:8)
(Mechanical engineering---Problems, exercises, etc.)



CHERNAVSKIY, S.A., kand. tekhn.nauk; ITSKOVICH, G.M.; KISELEY, V.A.:
BOKOV, K.N.; BONCH-OSMOLOVSKIY, M.A.; KOZINTSOV, V.P.;
FEDOTOV, G.I., prof., retsenzent; GIL'DBERG, M.I., red.izdva; SOKOLOVA, T.F., tekhn. red.

[Design of mechanical transmissions] Proektirovanie mekhanicheskikh peredach; uchebno-spravochnoe posoble po kursovomi
proektirovaniiu mekhanicheskikh peredach. Izd.2., perer.
[By] S.A.Chernavskii i dr. Moskva, Mashgiz, 1963. 799 p.
(MIRA 16:12)

(Power transmissions)

AFANAS'YEV, A.M.; YERMOLENKO, V.A.; KISELEV, V.A., zasl. deyatel'
nauki i tekhniki RSFSR, doktor tekhn. nauk, prof.;
MEDMIKOV, 1.A.; OVSYAMNIKOVA, M.V.; SLOKODCHIKOV, A.Ya.;
MEDMIKOV, I.N.; FEDOROV, Yu.P.; TSVEY, I.Yu.; DARKOV,
A.V., doktor tekhn.nauk, prof., retsenzent; FEDOROV, Yu.P.,
kand. tekhn. nauk, nauchn. red.

[Structural mechanics in examples and problems] Stroitel'naia mekhanika v primerakh i zadachakh. Moskva, Stroinaia mekhanika v primerakh i zadachakh. Moskva, Stroiizdat, 1964. 341 p.

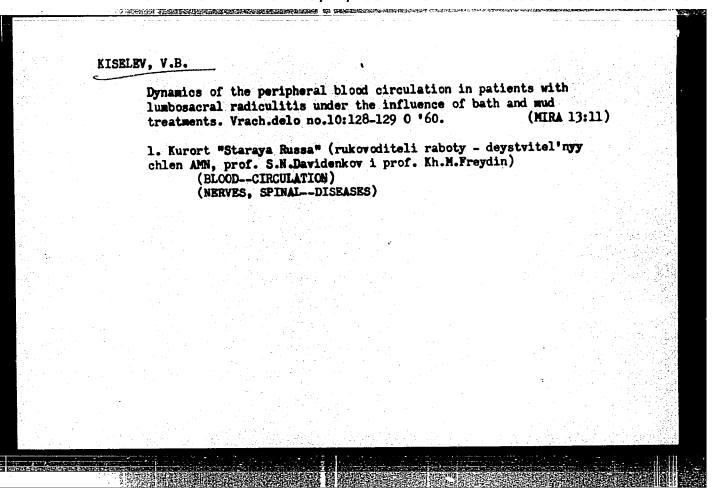
(MIRA 18:1)

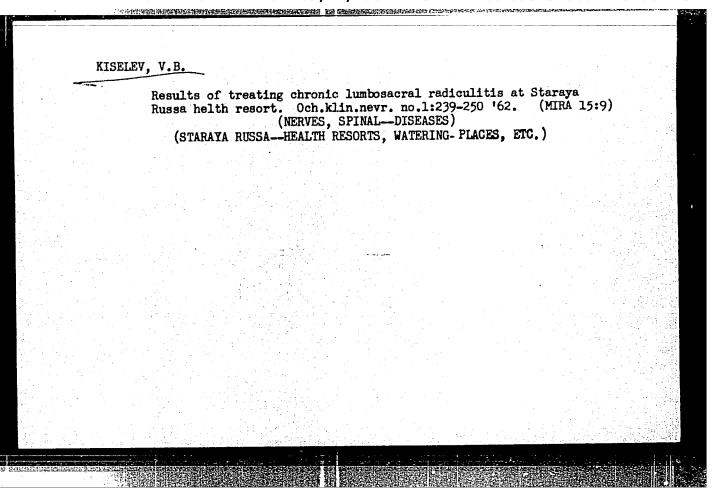
KISELEV, Vasiliy Aleksandrovich, doktor tekhm. nauk, prof.;
REKACH, V.G., doktor tekhm.nauk, retsenzent;
MEDNIKOV, I.A., kand. tekhm. nauk, dots., nauchm.red.

[Structural mechanics; a special course (the dynamics and rigidity of structures)] Stroitel'naia mekhanika;
spetsial'nyi kurs (dinanika i ustoichivost' sooruzhenii).

Moskva, Stroitzdat, 1964. 331 p. (MIRA 18:2)

"A comment on Shanley's theory of buckling of bars"  report presented at the 2nd All-Union Congress on Theoretical and Applied Mechanics, Moscow, 29 Jan - 5 Feb 64.	KISE	LEV, V.A. (Moscow)	
report presented at the 2nd All-Union Congress on Theoretical and Applied Mechanics, Moscow, 29 Jan - 5 Feb 64.		"A comment on Shanley's theory of buckling of bars"	
		report presented at the 2nd All-Union Congress on Theoretical and Applied Mechanics, Moscow, 29 Jan - 5 Feb 64.	
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		이 있다. 그러워 한 경험 이 경험 이 경험 이 보고 있다고 있다면 하는데 보고 있다. 그는데 이 전 전 경험 경험을 받는데 되었다. 이 경험 전 경험 경험 전 경험	
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		일 마시아 전환 경험 가입니다. 그 등을 보고 함께 되었다. 그는 사람이 되었다. 그는 사람이 되었다. 그는 사람이 되었다. 그는 사람이 되었다. 일본 사람이 사람이 되었다. 그는 사람이 들어 들어 들었다. 그는 사람이 되었다. 그는 사람에 되었	





Moscow in 1950. From Vechernyaya Moskva, Jan-Dec 1950.
- 발생한 경기 시간 전략을 하고 있다. 호텔 보고 있는 사람들은 보고 있는 사람들이 되었다. 그런 사람들이 되었다. 
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DEMICHEY, A.D.; KISELEY, V.F., starshiy dorozhnyy master (stantsiya Ira-Iol'
Pechorskoy dorogi) DOLOVSII., A.D.; KOMADDIN, A.A.; starshiy doroshnyy master
(Stantsiya Polotsk Belorusskoy dorogi); KURS, V.G., brigadir puti(stantsiya Cheremkhovo Vostochno-Sibirskoy dorogi); PAVIOV, V.N., brigadir
puti (stantsiya Cheremkhovo Vostochno-Sibirskoy dorogi); SHAKHBALAYEV,
A.M., doroshnyy master (stantsiya Zenzeli Ordzhonikidzevskoy dorogi);
TARASENKO, V.Ye., doroshnyy master (stantsiya Irkutsk II)

Letters to the editor. Put' i put.khos. no.11:43-45 N '58.

(MIRA 11:12)

1. Machal'nik normativnoy stantsii tresta "Rekput'." (for Demichev).
2. Zamestitel' nachal'nika distantsii, stantsiya Kizel Sverdlovskoy
dorogi (for Kozlovskiy).

(Railroad engineering)

SOV/124-58-7-8152 D

Translation from; Referativnyy zhurnal, Mekhanika, 1958, Nr 7, p 119 (USSR)

AUTHOR: Kiselev, V.F.

TITLE: Methods of Strength Analysis of Spar-type and Monocoque Wings

(Metody raschetov na prochnost' lonzheronnykh i kessonnykh

kryl'yev)

ABSTRACT: Bibliographic entry on the author's dissertation for the de-

gree of Doctor of Technical Sciences, presented to the Mosk.

aviats. in-t (Moscow Aviation Institute), Moscow, 1957

ASSOCIATION: Mosk. aviats. in-t (Moscow Aviation Institute), Moscow

1. Wings--Stability 2. Wings--Analysis

Card 1/1

SOV/124-58-11-13270

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 11, p 197 (USSR)

AUTHOR: Kiselev, V. F. (Vladimir Falypovich)

TITLE: Method for the Stress Analysis of a Delta Wing With Elastic Constraint

(Metod rascheta treugol'nogo kryla na prochnost' s uchetom uprugoy

, zadelki

PERIODICAL: Tr. Tsentr. aero-gidrodinam. in-ta, 1957, Nr 703, 43 pp, ill.

ABSTRACT: The stress analysis of a delta wing is reduced to the analysis of a conical shell of small elongation (aspect ratio). The solution utilizes the fundamental equations for the stresses and strains in a conical shell (ref. Balabukh, L.I., Tr. Tsentr. aerogidrodinam. in-ta, 1947, Nr 640). The influence of the constraint upon the stress distribution in the wing is accounted for with the aid of a self-balancing system of internal stresses represented in the form of a series, the terms of which consist of the products of two functions which vary along the section contour and along the generatrix of the cone. The function of

the variation of the self-balancing stress system along the contour must be selected suitably, while the function of the variation of these

Card 1/2 stresses along the span must be determined from the system of Euler

SOV/124-58-11-13270

Method for the Stress Analysis of a Delta Wing With Elastic Constraint

equations obtained upon variation of the expression of the potential energy of the wing. An analogous solution is obtained for a multi-web delta wing in which the webs are directed along the generatrices. In that problem the author introduces additionally the unknown stress fluxes in the spar webs which are determined from the system of canonical equations set up by the force method. Also obtained are formulas for the analysis of a swept-back box wing with the ribs aligned with the airflow; this is done by analogy with the calculation formulas obtained for the low aspect-ratio wing. The calculation procedure is exemplified in the case of the flexure of a two-web delta wing with rectangular section, loaded by force applied at the tip.

I. L. Kats

Card 2/2

KISELEV, V. F., Doc Tech Sci (diss) -- "Methods of computing the strength of longeron and caisson wings". Moscow, 1959. 12 pp (Min Higher Educ USSR, Moscow Order of Lenin Aviation Inst im Sergo Ordzhonikidze), 150 copies (KL, No 20, 1959, 111)

ORRAZTSOV, Ivan Filippevich; IISHLV, V.F., dotsent, kand.tekhn.nauk, retsensent; ZASLAVSHI, B.V., dotsent, kand.tekhn.nauk, red.; BOGOMCLOVA, M.F., izdat.red.; PURHIKOVA, N.A., tekhn.red.

[Stability analysis of baseonnykh konstruktsii tipa kryla, raschata na prochnost baseonnykh konstruktsii tipa kryla, Moskva, Gos.izd-ve obor.promyshl., 1960. 311 p. (MIRA 13:5)

(Airplanes-Wings)

AM4016095	BOOK EXPLOITATION	S1 <sub>2543</sub>
Kiselev, Vladimir F	ilippovich	
rescheta treugo Oborongiz, 57. not given.	alysis of delta wing with elastic l'nogo kry*la na prochnost' s ucl 0041 p. illus:, biblio. Errata : w. Tsentral'ny*y aero-gidrodina	hetcm uprugoy zadelki) Moscow, slip inserted. No. of copies
TOPIC TAGS: airpla backswept wing, mul gliano method	ne wing, delta wing, stress anal tispar delta wing, shell wing, b	ysis, elastic wing root support, ackswept ribbed wing, Casti-
delta wing with ela gliano variational	E: The book contains a method o stic wing skin in the vicinity o method is used. The book is int design offices, and for instruc-	f the root support. The Casti- ended for engineering-technical

aviation schools.

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TABLE OF CONTENTS	[abridged]: -			
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3. Design of wings 4. Multispar delta	in the region	of an elastic wing	skin support :	u i
4. MULTISDAM GELLA	WILL 41			
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ACC NR: AP6004095 (N) SOURCE CODE: UR/0020/66/166/002/0395/0398

AUTHOR: Prudnikov, R.V.; Kiselev, V.F.; Yegorov, M.M.

ORG: Moscow State University im. M.V. Lomonosov (Moskovskiy gosudarstvennyy universitet)

TITLE: Study of the adsorptive properties of the germanium dioxide surface

SOURCE: AN SSSR. Doklady, v. 166, no. 2, 1966, 395-398

TOPIC TAGS: adsorption, germanium compound

ABSTRACT: Measurements of adsorption, heat of adsorption, structural water content, and specific surface were carried out for a germanium dioxide surface with water as the adsorbate; water was chosen because its adsorption is the most sensitive to the state of the oxide surface. The adsorptive activity of GeO<sub>2</sub> heated to various temperatures is correlated with the structural transformations taking place in this oxide; as the temperature of the heat treatment rises from 20 to 300C, the specific values of the primary adsorption increase, the maximum adsorption being displayed by samples heated to 300C: a further rise in temperature causes a sharp decrease in adsorptive activity. This behavior is attributed to the healing of surface defects and conversion to the purely tetragonal form Card 1/2

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SUB CODE: 07	/ SUBM DATE: 02Jun65	/ ORIG REF; 010	/ OTH REF: 004	
Card 2/2 vmb				

NAUMOV, K.A.; KISELEV, V.F., doktor tekhn. nauk prof., red.

[Strength of materials; manual for the course on "Technical mechanics, Part I" for students specializing in "Hadio engineering" and "Design and construction of radio equipment"] Soprotivlenie materialov; uchebnoe posobie po kursu "Tekhnicheskaia mekhanika" chast' I dlia studentov spetsial'nostei "Radiotekhnika" i "Konstruirovanie i proizvodstvo radioelektronnoi apparatury". Izd.2., perer. Moskva, Vses. zaochnyi energ. in-t, 1965. 389 p.

(NIRA 19:1)

MASHCHENKO, A.I.; SHARANW, V.M.; KAZANSKIT. V.D.; KISELSV. V.J..

Appearance of electron paramagnetic resonance signale during the low-temperature adsorption of various gases on reduced mutile (TiO2). Teoret. i eksper. khim. i no.31381~386 My.Je 165. (MIRA 1819)

1. Enstitut khimicheskoy fiziki AN SSSR, Moskva.

KISELEV, V. G.

"Selection of Optimum Face Length Under Conditions Prevailing in the Vorkuta Coal Deposit." Cand Tech Sci, Chair for the Working of Stratified Deposits, Leningrad Order of Lenin and Order of Labor Red Banner Mining Inst, Min of Higher Education USSR, Leningrad, 1954. (KL, No 8, Feb 55)

SO: Sum. No. 631, 26 Aug 55-Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (14)

KISELEV, V.G.; KUPRIN, A.I.

Possible flow sheets for the mining of inclined and steeply pitching seams using gravity haulage. Trudy VNIIGidrouglia no.1:64-68 '62. (MIRA 16:12)

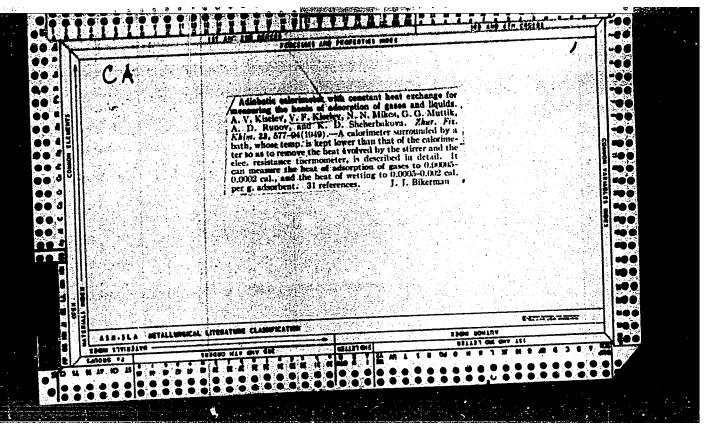
1. Sibirskiy metallurgicheskiy institut.

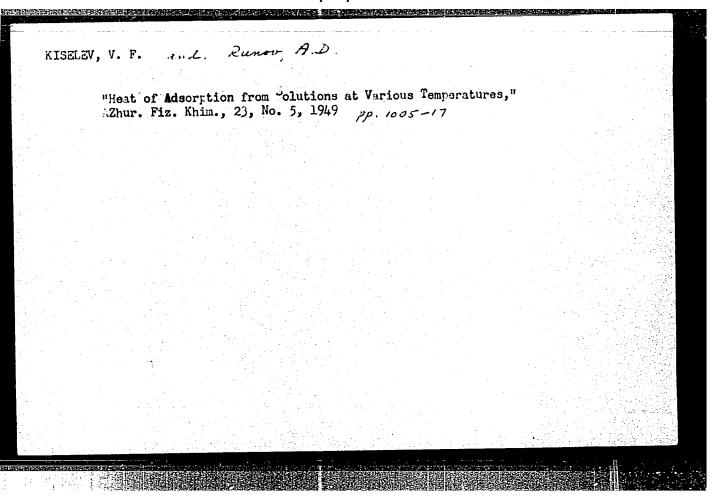
MISELEV, V.G., kand.tekhn.nauk

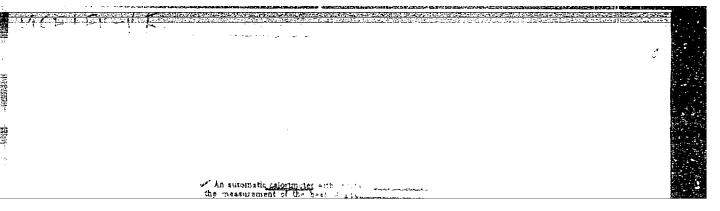
An important potential for increasing the efficiency of electric drills, Ugol' 40 no.3:45-47 Mr '65.

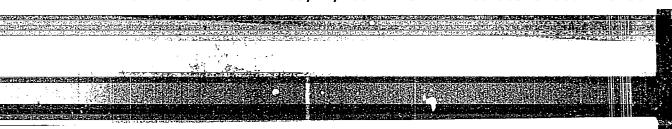
1. Sibirskiy metallurgicheskiy institut.

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722810011-9









KISELEV, V. F.

Cand Phys Math Sce

Defended his Candidates dissertation in the Physics Faculty of Moscow State University on 2 June 1952.

Dissertation: "Heats of Adsorption by Solid Adsorbers of Pure Liquids and Solutions."

SO: Vestnik Moskovskogo Universiteta, Seriya Fiziko-Matematicheskikh i Yestestvennykh Nauk, No. 1, Moscow, Feb 1953, pp 151-157: transl. in W-29782, 12 April 54,

KISELEV, A.V.; KISELEV, V.F.; MIKOS#AVGUL', N.N.; MUTTIK G.G.; RUNOV, A.D.; SHCHERBAKOWA, K.D.;

Calorimeters and Calorimety

Automatic calorimeter with constant heat exchange for measuring heats of absorption of gases and liquids. Trudy Inst. fiz. khimii AN SSSR no. 1, 1952

Monthly List of Russian Accessions, Library of Congress, December 1952. UNCLASSIFIED

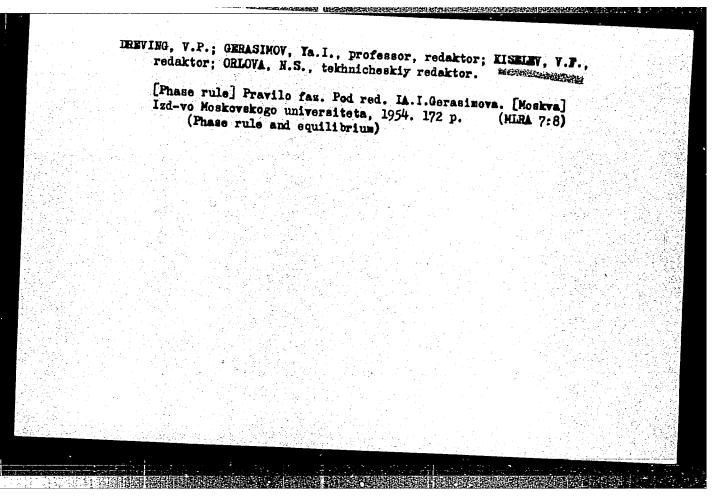
KISELEV, V.F.

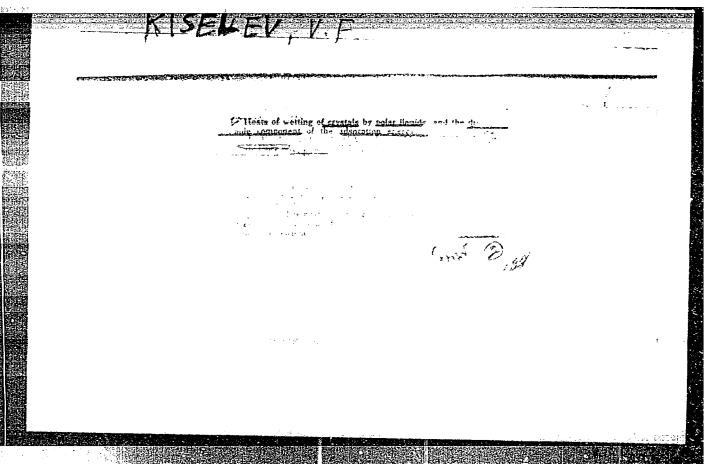
Absolute heats of wetting of strontium, lead, and barium sulfates, with water and with alcohols. B. V. Il'in and V. F. Kiselev (Moscow State Univ.). Doklady Akad. Nauk S.S.S.R. 82, 85-7(1952).--The heats of wetting Q were detd. by calorimetry on  $SrSO_{l_1}$  and  $PbSO_{l_2}$  preliminarily heated to a temp. low enough  $(260^{\circ})$  to guarantee against sintering. Sp. surface areas, as detd. by the B.E.T. method of absorption of No at -195.7°, were: SrSOl, 4.5, PbSOl, 2.3 sq. m./g., comparing with 5.3 and 2.4 by electronmicroscope photography. The mean values of 0, with  $H_2O$ , MeOH, and  $C_8H_{17}OH$ , are, for SrSO<sub>li</sub>, 0.3h  $\pm 0.01$ , 0.22 $\pm$  0.005, and 0.23 $\pm$  0.02, and for PbSO<sub>li</sub>, 0.28 $\pm$  0.01, 0.17 $\pm$ 0.01, and 0.17 ± 0.02 cal./g. The abs. values of Q, per unit surface area, are, for Srso<sub>l</sub>, 315, 200, and 215, and for Pbso<sub>l</sub>, 490, 320, and 310 ergs/sq. cm. The values of Q for Srso<sub>l</sub>, Pbso<sub>l</sub>, and Baso<sub>l</sub> (cf. ibid. 59, 925-7(1948); Zhur. Eksptl. Teoret. Fiz. 6, 1155(1936); C.A. 45, 3232i) are of the same order as the theoretically calcd. electro static component of the absorption energy. However, the decrease of Q from SrSO<sub>l</sub>, to PbSO<sub>l</sub>, to BaSO<sub>l</sub>, predicted by the theory is not observed. Likewise, there is no difference in the abs. adsorption isotherms of the 3 sulfates for N<sub>2</sub> at -195.7, in miscromoles/sq. m. as a function of p/p.; the points for all 3 sulfates lie on the same isotherm. This absence of any systematic variation could be due to differences of drying conditions, or in the structure of the adsorbing surfaces; such differences appear in the electron-microscope photographs. On the other hand, there is, for each given adsorbent, a systematic decrease of Q from HoO to the alcs. The ratio of Q for H2O and for alcs. is approx. the same for SrSO, and PoSO,, 1.5-1.6. From the electrostatic theory, on the basis of the 2:1 ratio of the areas of alcs. and of HoO, a ratio of Q of 1.8-1.9 should be expected. This ratio is reduced to 1.5 if the radium of the 50, -ion is taken into account.

Inst. Physics, Moscow State U.

KISELEV,	V. F.	The second secon	tu tulku∎atu naatu a tak			234120
		ently are related to polymol adsorption. At that point on the adsorption isotherm, where the curve has a stepwise character, the heat of adsorption curve has a series of minima. Presented by Acad M. M. Dubinin 5 Jul 52.	of adsorption are S-shaped.  and in heat of adsorption i	"Dok Ak Nauk SSSR" Vol 86, No 1, pp 111-113 The heat of adsorption and adsorption isoth phenol-water solns close to the sepn conco	"Studying the Adsorption and Heat of Adsorption of Phenol in Aqueous Solution on Nonporous Carbon Black V. F. Kiselev, K. G. Krasil'nikov, Moscow State U imeni M. V. Lomonosov and Inst of Phys Chem, Acad of Sci USSR	USSR/
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2.	USSR (600)				
4.	Carbon Black				
7.	Absolute values of the he 89, no. 1, 1953.	eat of wetting of	non-porous carbon	black, Dok	l. AN SSSR
9.	Monthly List of Russian	Accessions, Librar	ry of Congress,	May	_1953, Uncl.





KLSELEV, V.F.

USSR/ Physical Chemistry - Surface phenomena. Adsorption. Chromatography.

B-13

: Referat Zhur - Khimiya, No 4, 1957, 11393

Author

: Aleksandrova G.I., Kiselev V.F., Krasil'nikov K.G., Murina V.V.,

Inst

Abs Jour

: Academy of Sciences USSR; Moscow State Univ.

Title

: Heat of Wetting of Silicagel of Different Degrees of Hydration by

Some Organic Liquids

Orig Pub : Dokl. AN SSSR, 1956, 108, No 2, 283-286

Abstract : Determined were the heat values of wetting of surface unit of dehydrated, at 300-900°, of specimens of silicagel (SG) of different porosity by sbsolute methanol (Q1), n-propanol (Q2) and non-polar n-heptane (Q3). Q1 does not depend on the nature of porosity of SG; Q2 and Q3 are higher in the case of coarsely porous SG, than for finely porous, which is attributed to the effect of pores which increases on transition to larger molecules of C3H7OH and C7H14. Q1 and Q2 increase linearly with degree of hy-

dration ( $^{\{i\}}_{H2}$ O) of SG surface, which confirms ( see reference ) the assum-

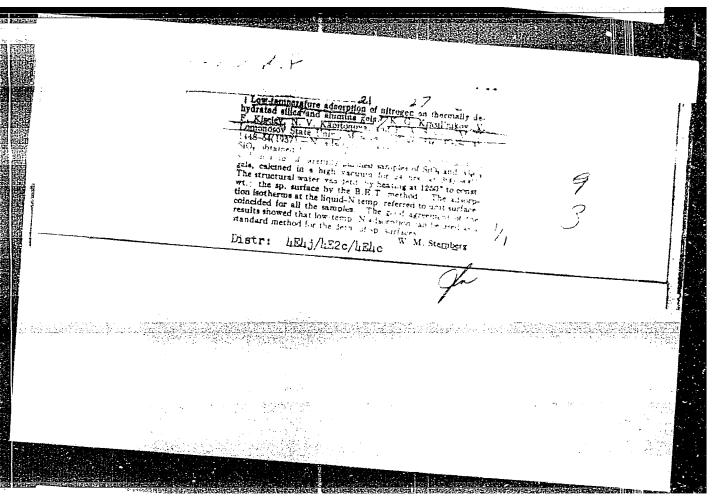
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USSR/ Physical Chemistry - Surface phenomena. Adsorption, Chromatography.

Referat Zhur Rhise 205/17/2009,1 11393 CIA-RDP86-00513R000722810011-9"

ption of heterogeneity of SG surface. Q3 is almost not dependent on H20. The conclusion is arrived at that most of the earlier data on heat of wetting of SG are not mutually comparable since no account was taken of the correlation between Q and (...) H20 and the nature of porosity of SG (see RZhKhim, 1956, 77773)

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722810011-9



AUTHORS: Yegorov, M. M., Yegorova, T. S., Kiselev, V. F., 20-114-3-35/60 Krasil'nikov, K. G. TITLE: The Adsorption of Water Vapors on Silica Gels Hydrated to Varied Degrees (Adsorbtsiya parov vody na silikagelyakh razlichny PERIODICAL: Doklady Akademii Nauk SSSH, 1957, Vol. 114, Nr 3, pp. 579-582(USSR) ABSTRACT: As is known, the adsorption of water vapors on silica gels is characteristic by some specific properties. Some previously published scientific papers have investigated in detail the irreversible adsorption of water vapors which is connected with an additional hydration of the silica-gel surface in the process of adsorption. Other investigations reached the conclusion that the isotherm of the adsorption of water vapors, depending on the degree of the dehydration of the silica-gel surface and of porous glasses, is transformed from a convex into a concave line, the latter corresponding to a hydrophobic surface. There exist different divergences in computing the specific surfaces of silica gels from the isothermal lines. Card 1/4 None of the authors of the above-mentioned scientific papers

The Adsorption of Water Vapors on Silica Gels Hydrated to Varied Degrees

conducted the chemical analysis of the surfaces of the silica gels and of porous glasses. This task was now performed by the authors of the paper under review. Figure Nr 1 of the paper under review represents the isotherms of the water vapors on the initial silica gels and also the curves of distribution as computed from the desorption branches - of the pore volume with respect to their effective diameter taking into account the thickness of the adsorbed film. Figure Nr 2 contains the initial segments of the primary vapor adsorption on all samples of silica gels, computed for 1 m2 of the surface. It can be seen from figure Nr 2 that the isotherms of the three initial samples, worked at 300 degrees centigrade, are placed in such a way that p/p being the same, the adsorption decreases with a decrease in the degree of hydration of the surface, and this corresponding to the observed reduction in heat of the water moistening of the same samples. The state attained at the watter adsorption at the thermally dehydrated surfaces are not equilibrated, as far as in this case the process of hydration of the surface can take place. However, in the monomolecular range at small p/p this process is very slow. Therefore it is possible to consider the isotherms of the figure Nr 2A of the silica gel samples K-2, annealed at high tempera-

Card 2/4

The Adsorption of Water Vapors on Silica Gels Hydrated to Varied Degrees

tures, as equivalent from the point of view of adsorption. For this pur pose, however, one has to neglect the slight modification of the surface hydration during the process of establishing the adsorption equilibrium. If these isotherms are compared with the previous ones, it can be seen that, depending on the surface hydration, they change their form and become concave. It is furthermore observed that in this context the capacity of adsorption of the silica gel decreases. Quite a number of assumptions - as found in relevant scientific literature - on the mechanism of adsorption of water vapors on silica gel and on the hydration of its surface, are in contradiction to each other; these assumptions are based on adsorption data and also on the investigation of the infrared spectra of the surface layer. In order to clarify these questions, additional research is necessary, namely study of adsorption linked with spectroscopic investigations. There are 2 figures, 1 table, and 20 references, 14 of which are Slavic.

Card 3/4

NIDELEV V. L.

AUTHORS: Krasil'nikov, K. G., Kiselev, V. F., Sysoyev, Ye. A. 20-6-27/42

TITLE: Nature of the Surface of a Dehydrated Silicagel

(K voprosu o prirode poverkhnosti degidratirovannogo

silikagelya)

PERIODICAL: Doklady AN SSSR, 1957, Vol. 116, Nr 6, pp. 990-993 (USSR)

ABSTRACT: The authors carried out quantitative measurements of the adsorption of nitrogen and oxygen on silicagels which were de-

hydrated in high vacuum. The adsorption was measured by means of the volum method. The silicagel test piece was introduced into a quartz ampule and annealed after previous draining at 300°C at an assumed temperature. Then the prepared portion of the gas to be investigated was introduced into the ampule and the corresponding measurements were carried out at 200 C. Nitrogen is not adsorbed under these conditions within the accuracy

of measurement. With oxygen, the surface of silicagel dehydrated in vacuum at temperatures of 300 to 900° C adsorbes the oxygen to a considerable extent. Hereby the quantity of ab-

sorbed oxygen grows with an increase of the annealing temperature. The effect of a short-wave radiation and the thermic dehydration in the final effect apparently lead to the sameproperties of the surface. The authors further investigated the

Card 1/2

heats of wetting of the silicagels with water in which case these silicagels were previously annealed in vacuum at various temperatures up to 800° C. The data obtained during this

operation are summarized in a table. The two silisated here, produce after inneaclar RDP86-005138006722810011-9'

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Surface of the silicagel dehydrated in vacuum, centers with higher activity of adsorption than with the OH-groups are formed. The results obtained in this case agree with the measurements of other authors (reference 11,12). There are 2 figures and 12 references, 8 of which are Slavic.

ASSOCIATION: Moscow State University im. M. V. Lomonosqv

(Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova). PRESENTED:

May 4, 1957, by M. M. Dubinin, Academician. SUBMITTED:

May 26, 1957

AVAILABLE: Library of Congress

Card 2/2

AUTHORS: Yegorov, M.M., Yegorova, T.S., Kiselev, V.F., TITLE: SOV/55-58-1-27/33

Influence of the Nature of the Silica Gel Surface on the Adsorption of the Methyl Alcohol Vapors (Vlivaniva prince nosti silikagelya na adsorbtsivu n PERIODICAL: VA

5(4)

AUTHORS:

Il'in, B.V., Kiselev, V.F., and Krasil'nikov, K.G.

sov/55-58-2-31/35

TITLE:

Heat of Wetting of the Silica Gels of Different Degrees of Hydration (Teploty smachivaniya silikageley razlichnoy

PERIODICAL:

Vestnik Moskovskogo Universiteta, Seriya matematiki, mekhaniki, astronomii, fiziki, khimii, V./3 1958, Nr 2, pp 223-232 (USSR)

ABSTRACT:

The paper contains the results of a systematic investigation of the heat of wetting of different kinds of silica gels. The wetting of the surface was carried out by water, n-propylalcohols and n-heptane. The structural water content of the were essentially confirmed. The opinion of A.V. Kiselev and which the unit of the surface of the silica gel possesses case: The properties of the surface of the silica gel possesses case: The properties of the surface essentially depend on water content of the surface layer.

There are 6 figures, and 25 references, 15 of which are Soviet,

· Carrier 1/2.

Chair of Gen. Physics Faculty of Chemistry

AUTHORS:

Kiselev, V.F., Krasil'nikov, K. G.

TITLE:

The Specific Character of the Adsorption of Phenol by Silicagel From Heptane Solutions (Osobennosti adsorbtsii fenola iz rastvorov v geptane silikagelem)

PERIODICAL:

Zhurnal fizicheskoy khimii, 1958, Vol. 32, Nr 6, pp 1435-1436

ABSTRACT:

In a previous paper it was found that the initial domain of the adsorption isothermal line shows a steplike character; more acurate measurements in this field showed that great changes of the integral heat adsorption according to the concentration take place. In connection with observations made by other authors it turned out to be interesting to carry out parallel experiments of the adsorption of phenol from solutions for purposes of investigating the adsorption isothermal line on the one hand and the heat of wetting of the same solutions on the same silicagel on the other hand. The authors used a coarse-pored silicagel KSK-1, the methods of measurement remaining the same as in the previous paper. The experimental results obtained do not yet permit the interpretation of the observations made, however, the authors put forward some ex-

The Specific Character of the Adsorption of Phenol by Silicagel From Heptane Solutions SOV/76-32-6-45/46

planations from which it may be seen that the phenomena are due to the complicated process of the filling of the surface of the adsorbent, which according to its properties is inhomogeneous, with the molecules of the substance to be adsorbed. It was found that the change of the chemical nature of the surface of the adsorbent caused by different ways of treatment (e.g. dehydration) can lead to the occurrence of steps in the isothermal line or to their removal, respectively. In order to be able to explain the occurrence of maxima and minima found on the isothermal line of the heat of wetting, or to find a possible connection with the step-phenomenon on the adsorption isothermal line more experiments will have to be carried out. There are 2 figures and 8 references, 7 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova (Moscow State University imeni M.V. Lomonosov) SUBMITTED: December 11, 1957

Card 2

5(4)

AUTHORS:

sov/76-32-10-33/39

TITLE:

Yegorov, M. M., Krasil'nikov, K. G., Kiselev. V. F.

The Influence of the Nature of Silica Gel and Quartz Surfaces on Adsorption Properties (Vliyaniye prirody poverkhnosti silikagelya i kvartsa na ikh adsorotsionnyye svoyotva) I. Investigations of the Hydration of the Silicon Dioxide Surface (I. Issledovaniya gidratatsii poverkanosti

PERIODICAL:

Zhurnal fizicheskoy khimii, 1950, Vol 32, Nr 10,

ABSTRACT:

Of late the presence of hydroxyl groups on silicon dioxide surfaces was found in investigations (Refs 8-13). The present paper deals in detail with investigations of the degree of hydration in dependence on the annealing in 7 different SiO<sub>2</sub> samples. The silica gel KSK was carefully purified; silica gel K-2 was obtained by a distillation of Sicl according to a method mentioned (Ref 3), and after storing under water it was termed silica gel K-3. "White root" and ground quartz (sample

Card 1/4

BS-1) were used as non-porous samples. The determinations

The Influence of the Nature of Silica Gel and Quartz SOV/76-32-10-33/39 of the Silicon Dioxide Surface

of the specific surfaces of the samples were carried out according to the BET method by means of nitrogen vapors. All silica gel samples used belong to the type of coarsely porous adsorbents (Ref 16). Dicgrams of the function of the water content versus the annealing temperature of the silica gels KSK-1, KSK-2, K-2 ard K-3 are given using data by Shapiro and Weiss (Veys) (Ref 14) as well as by Bastick (Bastik) (Refs 4, 17). The standard temperature for treating the samples was chosen to be 300°. The results show that the content of the water of constitution as related to the surface unit is different for various silica gels. In the case where the samples were treated exactly the same but a different specific surface was present no surfaces with the same degree of hydration could be obtained, which proves the incorrectness of the data mentioned in reference 21. On storing the samples in water it was found that the amount of water of constitution on the surface increased sharply. However, those samples treated

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5(4) AUTHORS:

Yegorov, M. M., Yegorova, T. S., Krasil'nikov, K. G., 507/76-32-11-25/32 Kiselev, V. F.

TITLE:

The Effect of the Nature of the Silica Gel and Quartz Surface on Its Adsorption Properties (Vliyaniye prirody poverkhnosti silikagelya i kvartsa na ikh adsorbtsionnyye svoystva) II. Adsorption of Steam, Methyl Alcohol and Nitrogen on Silica Gel of Different Degrees of Hydration (II. Adsorbtsiya parov vody, metilovogo spirta i azota na silikagelyakh razlichnoy stepeni gidratatsii)

PERIODICAL:

Zhurnal fizicheskoy khimii, 1958, Vol 32, Nr 11, pp. 2624-2633

ABSTRACT:

Silica gel samples and non-porous "white soot" described in the previous paper were used. The measurements of the adsorption were carried out according to the gravimetric method. It was found (Fig.1) that with samples treated at 300°C the adsorption (at constant p/pg) decreases with a decrease of the

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degree of hydration of the surface. The different adsorbability of the investigated silica gels is not due to their structure

The Effect of the Nature of the Silica Gel and Quartz Surface on Its on Silica Gel of Different Degrees of Hydration

but to the chemical nature of the surface (their degree of hydration). It is assumed that the hydroxyl groups with water molecules can form hydrogen compounds on the surface (Ref 12), and thus act as adsorption centers. Contradicting data given by other authors on the adsorption centers mentioned above (Refs 15,16) are explained by a different technique of in-Vestigation: As the hydration of the surface of the investigated samples is different the adsorption properties of the surface with respect to the molecules capable of forming hydrogen compounds with hydroxyl groups are also different. Measurements carried out of the surface of hydrated KSK-1 samples occupied by water molecules showed that within the range of p/p from 0.1 to 0.3 the value  $\omega$  changes from 39 to 22.5  $\hat{A}$  and thus is considerably higher than that given in publications (10.6 and 14.8  $\hat{A}^2$ ) (Refs 20-22). As the adsorption tion properties are functions of several factors (crystallography of the sample, chemical composition etc.) they cannot be called "absolute" properties ("absolute" isothermal lines). The authors thank M. M. Dubinin and B. V. Il'in.

Card 2/3

AUTHORS: Yegorov, M. M., Zarif'yunts, Yu. A., Kiselev, V. F., Krasilinikov, K. G. TI TLE: The Adsorption Properties of Alumo-Silicate Cutalysts and Their Dependence Upon Composition (Adsorbtsionnyye cvaystva alyumosilikatnykh katalizatorov i ikh zavisimosti ot sostava) PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol. 120, Nr 2, ABSTRACT: In some previous papers (Refs 1-4) it was shown that the adsorption Properties per unit of surface with respect to water and sthy? alcohol molecules are to a considerable extent dependent upon the degree of hydration of the surface. It would be of interest to extend such investigations to a number of alumo-silicates of varying composition. In the first stage of these studies the authors investigated the adsorption of steam and of methyl alcohol vapors and the heat necessary to wet the synthetic alumo silicate compounds. The catalysts had a content of 15% (Gudri cutalyst ), of 30% and of 50% of Al 203. The measurements of adsorption were carried out in Card 1/3 a calorimeter with constant heat exchange. A diagram gives the

The Adsorption Properties of Alumo-Silicate Catalysts and Their Dependence Upon Composition

SOV/20-120-2-28/63

function of the heat required for wetting by water various the content of crystal water for all alume silicates under investigation. These curves exhibit maxima which reproduce the thermal pre-treatment of the samples at 200-300. The comparatively high content of crystal water is of interest, in particular in the samples with a high Al203 content. The heats of wetting differ by about the double between silicagel and alumo-silicate with a low Al<sub>2</sub>0<sub>3</sub> content (15%) even with a similar hydration of the surface. The same sumples were also used for the determination of the isothermal lines of the adsorption of steam and of methyl alcohol vapors. The description isothermal lines of all samples are considerably below the adsorption isothermal lines: Silicarel, however, did not show such a behaviour. The structure of alumnsilicates is similar to that of silica, its surface, however, is more inhomogeneous. Investigation of the adsorption mechanism cannot be limited to the local adsorbed melecules with active conters, and their topography and their concentration must be taken into account. In conclusion the authors express their gratitude

Card 2/3

5(4) AUTHORS:

Yegorova, T. S., Kiselev, V. F., Krasil'nikov, K. G.

SOV/20-123-6-28/50

TITLE:

The Differential Heats of the Adsorption of Water Vapors on Silica Gels of Different Hydration (Differentsial nyye teploty adsorbtsii parov vody na silikagelyakh razlichnoy gidratatsii)

PERIODICAL:

Doklady Akademii nauk SSSR, 1958, Vol 123, Nr 6, pp 1060-1063

ABSTRACT:

No reliable data have hitherto been published on the dependence of the differential adsorption heats of water vapors on the filling up of the surface. In the present paper the silica gels K - 2 and KSK - 3 were used. The characteristic data of the adsorption on these samples are given in a table. The adsorption heats of the vapors were measured in a calorimeter similar to that described by reference 7; the wetting heats were measured in a calorimeter with constant heat exchange. The water vapors investigated the initial domains of isothermal lines and of the gels by means of two methods. A diagram shows the wetting heats

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The Differential Heats of the Adsorption of Water Vapors on Silica Gels of Different Hydration

SOV/20-123-5-28/50

as functions of the previously adsorbed quantity of water. In a previous paper (Ref 1) homogeneous large-pore adsorbents were investigated within the domain of adsorption up to the beginning of capillary condensation. The results obtained by calculating the differential adsorption heat as a function of specific adsorption are shown in form of a diagram. The adsorption heats for the silica gel K - 2 - 300°, which were determined by means of direct calorimetrical measurements, agree well with the theoretically calculated curves. The initial values of water adsorption on silica gel KSK are within the interval of 15 - 20 kcal/mol. At low degrees of filling the adsorbed molecules form 3 or even 4 hydrogen bonds with the hydroxyls of the surface. Part of the molecules is probably adsorbed within this domain on centers of higher energy. In the case of one and the same degree of filling the differential heats decrease with a decreasing degree of hydration of the surface. Also the differential entropy of water vapor adsorption

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TA\_PDP86-00513R00072281001

# Interaction of the surface of a solid body with water ("Interaction of the mineral part of soils with water" by I.A.Tiutiunov. Reviewed by V.F.Kiselev). Pochvovedenie no.12: 105-107 D '59. (WIRA 13:4) 1. Fizicheskiy fakul'tet Moskovskogo gosudarstvennogo universiteta. (Minerals in soils) (Soil moisture)

5(3), 5(4)

SOV/156-59-1-12/54

AUTHORS:

Zarif'yants, Yu. A., Kapitonova, N. V., Kiselev, V. F.,

Krasil'nikov, K. G.

TITLE:

The Adsorption of Benzene Vapors or Aluminosilicates of Various Composition (Adsorbtsiya parov benzola na alyumo-

silikatakh razlichnogo sostava)

PERIODICAL:

Nauchryye doklady vysshey shkoly. Phiniya i khimicheskaya

tekhnologiya, 1959, Nr 1, pp 48 - 11 (USSR)

ADSTRACT:

The insertion of AlO, totrahedrons in the structure of silica leads to a variation of the hydrated as well as unhydrated sectors of the surface. Thus also the adsorption properties vary during the transition from pure silica to aluminosilicates of various composition. Aluminosilicates with a content of 15, and 30% Al20, as well as

the aluminogel AT and silica gel K-2 were investigated. The isothermal lines of adsorption are given in diagrams. The initial sections (in enlarged reproduction)lie

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CIA-RDP86-00513R000722810011-9" **APPROVED FOR RELEASE: 09/17/2001** 

The Adsorption of Benzene Vapors on Aluminosilicates of Various Composition

SOV/156-59-1-12/54

on a curve, and the adsorption rises with increasing Alooa content. This cannot be explained by an increase of the adsorption potential in the pores. The adsorption of aluminogel is higher than that of equally porous aluminosilicate with 15% Al203 and of more fine-porous silica gel. The variation of the adsorptive capacity seems to depend on changes of the surface structure. This will be investigated with nonporous adsorbents in a future work. V. T. Bykov (Ref 8) assumed that the so-called "absolute" adsorption properties of the surface of silica and aluminosilicates are equal and extended this statement to various kinds of adsorbents. This is a false presumption, based on unfounded presuppositions. Actually, a function must be effective here which depends just on the specific properties of the surface of the individual adsorbents. The range, for instance, which is occupied by a benzene molecule on silica gel is larger than that on the aluminogel. Gratitude is expressed to B. V. Il'in for his assistance in this work. There are 2 figures and 16 refer-

Card 2/3

The Adsorption of Benzene Vapors on Aluminosilicates

SOV/156-59-1-12/54

of Various Composition

ences, 14 of which are Soviet.

ASSOCIATION:

Kafedra obshchey fiziki Moskovskogo gosudarstvennogo universiteta im. M. V. Lomonosova (Chair of General Physics of

Moscow State University imeni M. V. Lomonosov)

SUBMITTED:

July 10, 1958

Card 3/3

CIA-RDP86-00513R000722810011-9" **APPROVED FOR RELEASE: 09/17/2001** 

5(4)
AUTHORS: Yegorov, M. M., Kiselev, V. F., Krasil'nikov, K. G.,
Simanov, Yu. P.

ABSTRACT:

Card 1/2

TITLE: The Influence of the Phase Composition of the Adsorbents in the System Al<sub>2</sub>O<sub>3</sub> - H<sub>2</sub>O on These Surface Properties

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, 1959, Vol 2, Nr 3, pp 360-365 (USSR)

Cherenkov aluminum oxide from the laboratory of K. V. Topchiyeva khimicheskiy fakulitet MGU (Chemical Department of Moscow State University) was used for the investigation. The dehydration at different temperatures was investigated (Fig 1). Phase investigations were carried out by X-rey methods with cameras of the type RDK-57 and with X-ray tube: of the type BSV. The samples were tempered at different temperatures and the wetting heat was determined (Table). The results are - referred to 1 g oxide - represented in diagrams (Fig 2). A second representation is given with respect to the surface unit (Fig 3). A dependence between the structural water and the wetting heat per surface unit was found (Fig 4). The phase change and the change of the degree of wetting of the surface causes a sharp change of the

The Influence of the Phase Composition of the SOV/153-2-3-9/29 Adsorbents in the System Al<sub>2</sub>0<sub>3</sub> - H<sub>2</sub>0 on Their Surface Properties

surface properties. The authors thank K. V. Topchiyeva and B. V. Il'in for their assistance in the investigations. There are 4 figures, 1 table, and 10 references, 7 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet imeni M. V. Lomonosova -Kafedra fiziki (Moscow State University imeni N. V. Lomonosov -

Chair of Physics)

April 24, 1958 SUBMITTED:

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### CIA-RDP86-00513R000722810011-9 "APPROVED FOR RELEASE: 09/17/2001

SOV/76-33-1-11/45 5(4)

Yegorov, M. M., Kiselev, V. F., Krasil'nikov, K. G., Murina, V. V. AUTHORS:

The Effect of the Surface Nature of Silica Gel and Quartz on TITLE: Their Adsorption Properties (Vliyaniye prirody poverkhnosti silikagelya i kvartsa na ikh adsorbtsionnyye svoystva) III.

Heats of Wetting of Silicon Dioxide With Various Liquids (III. Teploty smachivaniya kremnezema razlichnymi zhidkost-

yami)

PERIODICAL: Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 1, pp 65-73 (USSR)

ABSTRACT: In connection with previous papers the effect of the hydration of the surface of silicon dioxide on the adsorption energy of water and methanol in the form of heat of wetting (HW) is in-

vestigated. HW was determined in several SiO, samples with

water, methanol, n-propanol, and n-heptane in dependence on the hydration degree of the surface. Data on the HW of the silica gels KSK with water were taken from M. M. Yegorov's thesis (Ref 18). The HW was measured by means of a calorimeter with a temperature sensitivity of 5.10<sup>-50</sup>C. A table of the investigated

silica gels with the HW obtained for water is given. An in-

Card 1/3 vestigation of the effect of the glowing temperature on the HW

The Effect of the Surface Nature of Silica Gel and Quartz on Their Adsorption Properties. III. Heats of Wetting of Silicon Dioxide With Various

(Fig 1) showed that a glowing temperature of 200-300°C the function curves pass through a maximum. An increase in the glowing temperature up to 1000°C resulted in a surface decrease, e. g. in silica gel K-2, of several  $m^2/g$ . A treatment at 300°C is considered the standard. Here, the dependence of the HW on the hydration of the surface is expressed by a service straight line. A wetting of thermally dehydrated samples with water results in the formation of hydration heat. A hydrated quartz surface differs qualitatively from a corresponding silica gel surface which can be explained by the closer packing of the hydroxyl groups (in quartz); however, investigations have still to be carried out in this respect (e. g. according to the method of the core-paramagnetic resonance). The HW of methanol does not depend on the porosity of the silica gels, which is the case with n-propanol and n-heptane. In the case of partly dehydrated surfaces a greater HW is obtained by the use of methanol than by that of water which can be explained by the effect of the methyl group in the adsorption. The results of the investigations show that the HW

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The Effect of the Surface Nature of Silica Gel and Quartz on Their Adsorption Properties. III. Heats of Wetting of Silicon Dioxide With Various

of the silica gel with water and methanol depends essentially on the hydration degree of the surface which is not the case with n-heptane. The authors thank B. V. Il'in and G. I. Aleksandrova. There are 3 figures, 1 table, and 22 references, 14 of which are Soviet.

ASSOCIATION:

Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University imeni M. V. Lomonosov)

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5(4)

05806

AUTHORS:

SOV/76-33-10-4/45 Yegorov, M. M., Kiselev, V. F., Krasil'nikov, K. G.

TITLE:

On the Problem of the Adsorptive Power of a Unit of the

Quartz Surface

PERIODICAL:

Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 10, pp 2141-2144

ABSTRACT:

Since the quantity of adsorbed OH groups depends on the number of free corners of the SiO tetrahedron which project into the surface of the silica-gel skeleton, it was assumed (Refs 2-4) that differences in the degree of hydration of silica gels (Refs 1-4) is connected with the manner in which the tetrahedron is packed (in dependence on the conditions of silica-gel preparation). The adsorptive properties of samples of amorphous silicon dioxide of various origin (silica gels and quartz glass) were therefore compared with those of quartz samples since the latter has the densest packing of SiO4 tetrahedrons. The authors investigated powder samples obtained by grinding

(carried out by L. A. Feygin), crystalline quartz and transparent quartz glass. The samples were ground in dry state as well as under the addition of water. The adsorptive properties of the samples are listed (Table: quartz, Kv-1, -2, -3

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samples, quartz glass, sample KS-1 and the silica gels KSK-1

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repruary 20, 1990

Card 2/2

5(4)

AUTHORS:

Bakayev, V. A., Kiselev, V. F., Krasil'nikov, K. G.

SOV/20-125-4-40/74

TITLE:

The Reduction of the Melting Temperature of Water in the Capillaries of a Porque Body (Ponizheniye temperatury plavleniya

vody v kapillyarakh poristogo tela)

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 125, Nr 4, pp 831-834

ABSTRACT:

From the data concerning the phase composition of an adsorbed substance as a function of temperature it is possible to determine the quantitative characteristic of the structure of a porous body by determining not only the radius but also the volume of the capillaries in which the phase transformations take place. The quantity of adsorbed substance in 1 g of the adsorbent melting at the temperature T can be determined from the specific heat of the system adsorbent-adsorbed substance. A more simple, but sensitive method is that of indirect determination of heat capacity by measuring the temperature conductivity  $\lambda$  of the system. The authors carried out these measurements by employing the modified method of "linear temperature increase". The adsorbents used were the silica gels KSK-2,

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The Reduction of the Melting Temperature of Water in the 80V/20-125-4-40/74 Capillaries of a Porous Body

- The state of the

KSM-1 and a specimen of a non-porous alumina BS-1. In these samples the isothermal lines of the adsorption of water vapors were measured. Measurements of temperature conductivity were carried out ranging from the temperature of liquid nitrogen to the temperature of 2750 K. The dependences of the quantity  $const/\lambda$  on temperature thus determined are shown by a diagram. The theory of capillary condensation shows a connection between the reduction of temperature of the phase transformation and the radius of the capillaries containing the adsorbent substance. A connection between the freezing temperature of water and the radius of the pores can be derived. The points in the diagram  $\Delta T = f(103/r)$ , which were determined for various samples and by various methods, are well suited for a straight line. The method: of determining const/ $\lambda$  suggested by the authors makes it possible quickly to determine the substance adsorbed in the porous body. Herefrom it is then possible to determine the curve for the distribution of the volume of the pores over their effective radii. The authors thank L. V. Radushkevich for his interest in this investigation.

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The Reduction of the Melting Temperature of Water in SOV/20-125-4-40/74 the Capillaries of a Porous Body

There are 3 figures and 8 references, 2 of which are Soviet.

ASSOCIATION:

Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University imeni M. V. Lomonosov). Institut fizicheskoy khimii Akademii nauk SSSR (Institute of Physical Chemistry of the Academy of Sciences, USSR)

PRESENTED:

December 24, 1958, by M. M. Dubinin, Academician

SUBMITTED:

December 17, 1958

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5 (4), 15 (2)

AUTHORS: Ganichenko, L. G., Kiselev, V. F.,

SOV/20-125-6-29/61

Krasil'nikov, K. G.

TITLE:

The Influence of the Hydration of the Surface of Silica on the Adsorption of Aliphatic Alcohols From Solutions (Vliyaniye

gidratatsii poverkhnosti kremnezema na adsorbtsiyu

alifaticheskikh spirtov iz rastvorov)

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 125, Nr 6,

pp 1277-1280 (USSR)

ABSTRACT:

The influence exercised by the hydration of the surface of silica is investigated for the adsorption of stream (Ref 1) and saturated hydrocarbons (Ref 2). In the former case this influence is considerable, in the latter it is insignificant. It was therefore of interest to investigate this influence in the adsorption of alcohols which have both hydroxyl groups and carbon chains. Measurements were carried out of the

adsorption of methanol-, n-propanol-, n-hexanol, and n-octanol from carbon tetrachloride solutions. Two samples of non-

porous silica - "white carbon black" - BS-1 and BS-2 were used. The samples were annealed before the experiments at 3000, one

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of the BS-2 samples also at 700°. The results obtained are

The Influence of the Hydration of the Surface of SOV/20-125-6-29/61 Silica on the Adsorption of Aliphatic Alcohols From Solutions

shown by table 1. Figure 1 shows the isothermal lines of adsorption, figure 2 shows the dependence a) of the adsorption maximum, b) of the surface occupied by the adsorbed molecules, c) of the thickness of the adsorption layer, d) of the ratio between the adsorbed molecules and the number of hydroxyl groups on the degree of surface hydration. Whereas methanol is still considerably influenced by the degree of hydration, this influence decreases with an increase of the carbon chain. The adsorption of octanol is not influenced at all. With an increasing length of the carbon chain the behavior of the alcohols thus approaches that of the hydrocarbons. Further, the marked increase in thickness of the adsorption layer of methanol is discussed. It is explained by variation of molecule orientation, which may be caused by a polymorphic transformation due to the thermal treatment of the silica, and leads to steps or discontinuities in the adsorption isothermal line. There are 3 figures, 1 table, and 15 references, 13 of which are Soviet.

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The Influence of the Hydration of the Surface of SOV/20-125-6-29/61 Silica on the Adsorption of Aliphatic Alcohols From Solutions

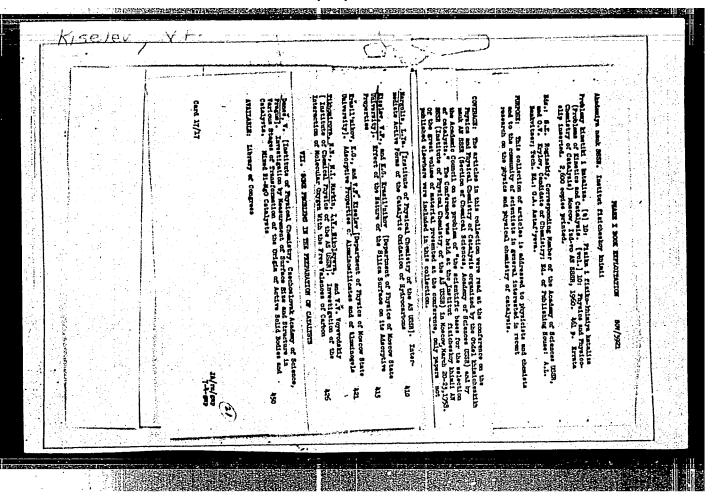
ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosowa

(Moscow State University imeni M. V. Lomonosov)

PRESENTED: December 30, 1958, by M. M. Dubinin, Academician

SUBMITTED: December 24, 1958

Card 3/3



APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722810011-9"

S/062/60/000/009/002/021 B023/B064

AUTHORS:

Ganichenko, L. G., Dubinin, M. M., Zaverina, Ye. D.,

Kiselev, V. F., and Krasil nikov, K. G.

TITLE:

Study of the Vapor Adsorption on Adsorbents With

Heterogeneous Surface. Communication 2. Experiments With

Organically Substituted Silica Gel

PERIODICAL:

Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh

nauk, 1960, No. 9, pp. 1535-1543

TEXT: The adsorption of various vapors on methylated course-porous silica gel and a demethylated sample obtained therefrom is discussed here. The conditions of investigation were chosen in such a way that an essential change of the specific surface seemed to be unlikely. Coarse-porous commercial silica gel KCK(KSK) was taken as initial sample and carefully purified from iron and other impurities. To methylate the surface, silica gel was repeatedly treated with dichloro dimethyl silane vapors at 200°C. Then, the vapors were sucked off in vacuum at 100°C, and silica gel washed with water until the reaction for the chlorine ion was negative. The

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